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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,848	03/30/2004	Bruce Alan Fairman	SONY-27700	6497

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EXAMINER

CHU, WUTCHUNG

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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07/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/814,848

Applicant(s)

FAIRMAN, BRUCE ALAN

Examiner

Wutchung Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Priority

1. Applicant's claim for domestic priority under 35 U.S. C. 119(e) is acknowledged.

Drawings

2. The drawings are objected to because figure 3 is not labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy

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must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

5. Claim 23 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Regarding claim 23, the claim is objected as it depends on itself. Claims 24-26 are objected as they depend on claim 23.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7 line 4, the term "the cycle master" has no antecedent basis. Similar problem exists for claims 21 line 4 and claim 62 line 4.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kanehara (20010003526A1).

Regarding claim 1, Kanehara discloses a Packet processing apparatus, and packet processing method (**see paragraph 18 line 1-2**) comprising:

- a. packetizing one or more data streams into isochronous data packets (**see paragraph 56 line 1-3 and figure 1 box 102 IEEE1394 packet processor**);
- b. encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet (**see paragraph 38, 56, and 72 line 1-7**); and
- c. sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network (**see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated corresponds to transmitting data packet to either self node or over a non-isochronous compliant network**).

Regarding claim 2, Kanehara teaches the transmitting device is coupled to a first isochronous compliant network and the receiving device is coupled to a second isochronous compliant network **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated, and it is obvious that both transmitting and receiving devices couple to first and second isochronous compliant networks).**

Regarding claim 3, Kanehara teaches the first isochronous compliant network and the second isochronous compliant network each comprise an IEEE 1394 compliant bus architecture **(see figure 2 IEEE1394 bus).**

Regarding claim 4, Kanehara teaches the first isochronous compliant network and the second isochronous compliant network are coupled via the non-isochronous compliant network **(see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated, and it is obvious that both first and second isochronous compliant networks are couple via a non-isochronous compliant network as it is capable in transmitting either in asynchronous or isochronous mode).**

Regarding claim 5, Kanehara teaches the non-isochronous compliant network comprises an Internet Protocol network **(see paragraph 32).**

Regarding claim 6, Kanehara teaches the Internet Protocol network comprises an Ethernet/Internet Protocol network **(see paragraph 32).**

Regarding claim 7, Kanehara teaches further comprising generating a cycle record **(see figure 7 box 710 time count)** for each isochronous cycle of the first isochronous compliant network, wherein each cycle record includes a relative timing marker that indicates a timing of the real-time transport protocol data packet relative to the cycle master of the first isochronous compliant network **(see figure 7 box 707 offset)**.

Regarding claim 8, Kanehara teaches the real-time transport protocol defines a real-time transport protocol header **(see paragraph 77 line 12)** and a real-time transport protocol data payload **(see paragraph 101 line 3)** for each real-time transport protocol data packet **(see paragraph 38 and 40)**.

Regarding claim 9, Kanehara teaches the real-time transport protocol data payload comprises one or more isochronous cycle records **(see paragraph 79 line 4 value)**.

Regarding claim 10, Kanehara teaches each of the one or more isochronous cycle records comprises zero or more isochronous data packets **(see paragraph 83 line 6)**.

Regarding claim 11, Kanehara teaches each isochronous data packet comprises an IEEE 1394 isochronous data packet **(see paragraph 36 line 2)**.

Regarding claim 13, Kanehara teaches the real-time transport protocol header includes a timestamp, the timestamp is defined by a value of the isochronous cycle start transaction corresponding to the receipt of a first isochronous data packet included in a

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particular real-time transport protocol data packet (**see paragraph 79 line 9 packet flag value and figure 5 box 508 packet flag**).

Regarding claim 14, Kanehara teaches each real-time transport protocol data packet includes at least a portion of an isochronous cycle record (**see figure 7 box 710 time count**).

Regarding claims 15-25 and 27-28, Kanehara teaches IP packet processing apparatus (**see paragraph 27 line 1 and figure 2**) and disclose all the limitations as discussed in the rejection of claims 1-11 and 13-14 and are therefore apparatus claims 15-25 and 27-28 are rejected using the same rationales.

Regarding claim 29, Kanehara teaches apparatus to communicate data streams, the apparatus comprising:

- a. a transmitting circuit configured to encapsulate one or more first isochronous data packets according to a real-time transport protocol (**see figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet processor and paragraph 56 and 38**), thereby forming a first real-time transport protocol data packet, and to transmit the first real-time transport protocol data packets over a non-isochronous compliant network (**see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated corresponds to transmitting data packet to either self node or over a non-isochronous compliant network**); and

- b. a receiving circuit configured to receive a second real-time transport protocol data packet from the non-isochronous compliant network (**see figure 1 box 110 IEEE1394 packet receiver and box 108 IP packet extractor**), and to de-encapsulate the received second real-time transport protocol data packets into one or more second isochronous data packets (**see paragraph 44**).

Regarding claims 30-35, 37, and 41-42, Kanehara discloses all the limitations as discussed in the rejection of claims 16-17, 22-25, and 27-28 and are therefore claims 30-35 and 37 are rejected using the same rationales.

Regarding claim 38, Kanehara teaches the transmitting circuit is further configured to packetize one or more data streams into the one or more isochronous data packets (**see paragraph 56 line 1-3 and figure 1 box 102 IEEE1394 packet processor**).

Regarding claim 39, Kanehara teaches the transmitting circuit is further configured to receive the one or more isochronous data packets from another device (**see figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet processor**).

Regarding claim 40, Kanehara teaches the receiving circuit is further configured to parse the one or more isochronous data packets from each received real-time transport protocol data packet (**see figure 1 box 110 IEEE1394 packet receiver and box 108 IP packet extractor**).

Regarding claim 43, Kanehara a network of devices to communicate data streams, the network of devices comprising:

- a. a transmitting device configured to encapsulate one or more isochronous data packets according to a real-time transport protocol, thereby forming a real-time transport protocol data packet, and to transmit the real-time transport protocol data packets (**see figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet processor and paragraph 56 and 38**);
- b. a first isochronous compliant network coupled to the transmitting device (**see figure 1 box 109 IEEE1394 packet transmitter**);
- c. a receiving device configured to receive the real-time transport protocol data packets (**see figure 1 box 110 IEEE1394 packet receiver**);
- d. a second isochronous compliant network coupled to the receiving device (**see paragraph 28 and figure 2 box 204 gateway**); and
- e. a non-isochronous compliant network coupled to the first isochronous compliant network and the second isochronous compliant network to transmit the real-time transport protocol data packets from the transmitting device to the receiving device (**see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated, and it is obvious that both**

transmitting and receiving devices couple to first and second isochronous compliant networks).

Regarding claims 44-50 and 52, Kanehara discloses all the limitations as discussed in the rejection of claims 17, 19-20, 22-25, and 27-28 and are therefore claims 44-50 and 52 are rejected using the same rationales.

Regarding claim 53, Kanehara teaches the transmitting device is further configured to packetize one or more data streams into the one or more isochronous data packets **(see figure 1 box 109 IEEE1394 packet transmitter and box 102 IP packet processor and paragraph 56 and 38).**

Regarding claim 54, Kanehara teaches the transmitting device is further configured to receive the one or more isochronous data packets from another device **(see figure 1 box 109 IEEE1394 packet transmitter).**

Regarding claim 55, Kanehara teaches the receiving device is further configured to parse the one or more isochronous data packets from each received real-time transport protocol data packet **(see figure 1 box 110 IEEE1394 packet receiver and box 108 IP Packet extractor and paragraph 44).**

Regarding claim 56, Kanehara teaches each received real-time transport protocol data packet includes at least a portion of an isochronous cycle record **(see figure 7 box 710 time count).**

Regarding claim 57, Kanehara teaches each isochronous cycle record comprises zero or more isochronous data packets **(see paragraph 83 line 6).**

Regarding claim 58, Kanehara teaches a method of communicating data streams, the method comprising:

- a. packetizing one or more data streams into IEEE 1394 compliant isochronous data packets (**see paragraph 17 line 10**);
- b. encapsulating one or more IEEE 1394 compliant isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet (**see paragraph 17 line 10 and paragraph 38**); and
- c. sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network (**see paragraph 72 and 73 where it is determined that the asynchronous packet or the isochronous packet is to be generated corresponds to transmitting data packet to either self node or over a non-isochronous compliant network**).

Regarding claim 59, Kanehara teaches the transmitting device is coupled to a first IEEE 1394 compliant bus architecture and the receiving device is coupled to a second IEEE 1394 compliant bus architecture (**see figure 2 IEEE 1394 bus and ref206**).

Regarding claims 60-65, 67, and 69, Kanehara discloses all the limitations as discussed in the rejection of claims 5-10 and 13-14 and are therefore claims 60-65, 67, and 69 are rejected using the same rationales.

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Regarding claim 68, Kanehara teaches further comprising parsing the one or more IEEE 1394 compliant isochronous data packets from each real-time transport protocol data packet received by the receiving device (**see figure 1 box 110 IEEE1394 packet receiver and box 108 IP packet extractor and paragraph 42 and 44**).

Claim Rejections - 35 USC § 103

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12, 26, 36, 51, and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanehara in view of Saito et al. (US6523696).

Regarding claims 12, Kanehara discloses all the subject matter of the claimed invention with the exception of each IEEE 1394 isochronous data packet includes an IEEE 1394 data payload formatted according to an IEC 61883-1 compliant Common Isochronous Protocol (CIP).

Saito et al. from the same or similar fields of endeavor teaches the use of encapsulation of the IEC 61883 (**see Saito et al. column 38 line 2**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the encapsulation of the IEC 61883 as taught by Saito et al in the packet processing apparatus, and packet processing method of Kanehara in order to provide necessary rules and guidelines for transmitting data (**see Saito column 38 line 5-10 and column 39 line 3-12**).

Regarding claims 26, 36, 51, and 66, Kanehara discloses all the limitations as discussed in the rejection of claim 12 and are therefore claims 26, 36, 51, and 66 are rejected using the same rationales.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Roy (US6831899) disclose voice and video/image conferencing services over the IP network with asynchronous transmission of audio and video/images integrating loosely coupled devices in the home network.

Jalonen (US2006/0173921) disclose system and method for data transmission and reception

Ben-Dor et al. (US2002/0141418) disclose tunneling between a bus and a network.

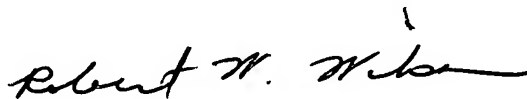
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

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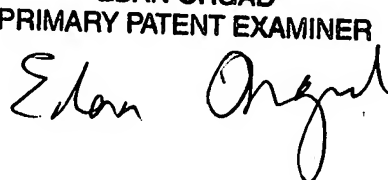
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571 272 7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/
Wutchung Chu



EDAN ORGAD
PRIMARY PATENT EXAMINER



7/17/07